### APPENDIX A

# Peer System Contacts

### Appendix A - Peer System Contacts

City	Agency/ Organization	Contact(s)	Telephone and/or E-Mail	
Charlotte	Charlotte Trolley	Lisa Grey	(704) 375-1435 lisa@charlottetrolley.org	
	Memphis Area	Dorothy Harris	(901) 577-2652	
Memphis	Transit Authority (MATA)	John Lancaster, Operations	(901) 722-7105	
New Orleans	New Orleans Regional Transit	Donald Preau	(504) 242-2600	
Trew offeating	Authority (NORTA)	Mitch Guidry	(504) 248-3780	
Portland	Portland Street Car, Inc.	Kay Dannen	(503) 478-6404 dannen@portlandstreetc ar.org	
San Francisco	San Francisco Municipal Railway	Tony Tufo, Operations	(415) 401-3119	
San Francisco	(Muni)	Ron Niewiarowski, Capital Programs	(415) 934-3938	
Tacoma	Sound Transit (ST) Regional Agency	Sue Comis	(206) 398-5000	
Tampa	Tampa Hillsborough Area Regional Transit Authority (HART)		(813) 254-4278	
Toronto	Toronto Transit Commission (TTC)		(416) 393-4000 scott.haskill@ttc.ca	

### APPENDIX B

## Detailed Alignments of the Three Lines

### Appendix B - Detailed Alignments of the Three Lines

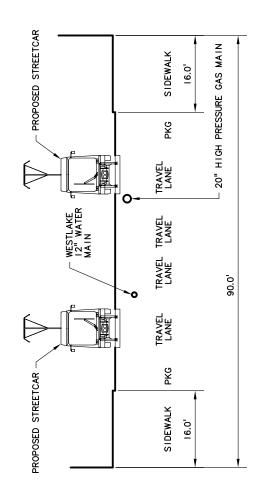
- B-1. South Lake Union Proposed Alignment: Olive Street to Denny Way
- B.2. South Lake Union Proposed Alignment: Denny Way to Valley Street
- B-3. South Lake Union Two Proposed Alignments: Westlake Avenue to Yale Avenue N.
- B-4. South Lake Union Proposed Alignment: Typical Section Westlake Avenue at Blanchard Street
- B-5. South Lake Union Proposed Alignment: Typical Section Valley Street at Terry Avenue
- B-6. South Lake Union Proposed Alignment: Typical Section Terry Avenue N. at Republican Street
- B-7. Waterfront - North Potential Alignment: Broad Street to W. Thomas Street
- Waterfront North Potential Alignment: W. Thomas Street to the Grain Terminal B-8.
- B-9. Waterfront – North Potential Alignment: the Grain Terminal to Amgen
- Waterfront International District Potential Alignment: 5<sup>th</sup> Avenue S. to 12<sup>th</sup> Avenue S. B-10.
- Waterfront International District Potential Alignment: 12<sup>th</sup> Avenue S. to 20<sup>th</sup> Avenue S.
- Waterfront International District Potential Alignment: 20<sup>th</sup> Avenue S. to 23<sup>rd</sup> Avenue S. B-12.
- Waterfront International District Potential Alignment: Typical Section S. King Street B-13. at I-5
- B-14. Waterfront - International District Potential Alignment: Typical Section S. Jackson Street at I-5

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ST

JUNE 30, 2004

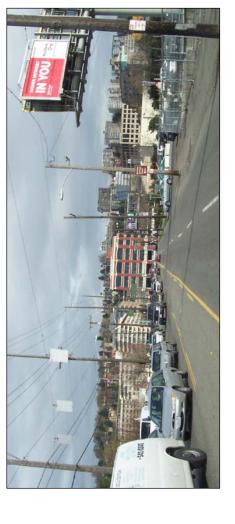


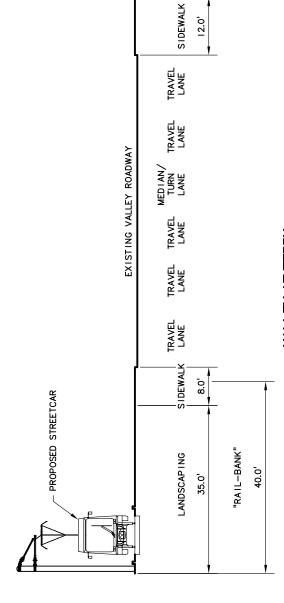


# WESTLAKE AT BLANCHARD

SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004

SOUTH LAKE UNION PROPOSED ALIGNMENT TYPICAL SECTION WESTLAKE AVENUE N. AT BLANCHARD STREET



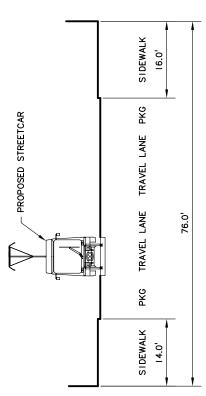


VALLEY AT TERRY LOOKING EAST

> SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004

> SOUTH LAKE UNION PROPOSED ALIGNMENT TYPICAL SECTION VALLEY STREET AT TERRY AVENUE N.





TERRY AT REPUBLICAN LOOKING NORTH

SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004

SOUTH LAKE UNION PROPOSED ALIGNMENT TYPICAL SECTION TERRY AVENUE N. AT REPUBLICAN STREET

B-8

WATERFRONT --NORTH POTENTIAL ALIGNMENT W. THOMAS ST TO GRAIN TERMINAL

SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004

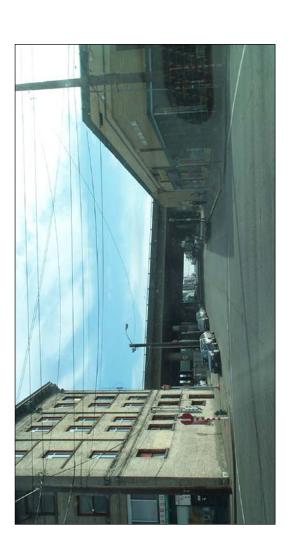
B-10

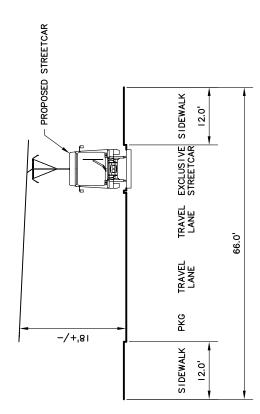
WATERFRONT - INTERNATIONAL DISTRICT Ś POTENTIAL ALIGNMENT VENUE S. TO 12TH AVENUE AVENUE **STH** 

**B**-I

WATERFRONT - INTERNATIONAL DISTRICT POTENTIAL ALIGNMENT I2TH AVENUE S. TO 20TH AVENUE S.

SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004





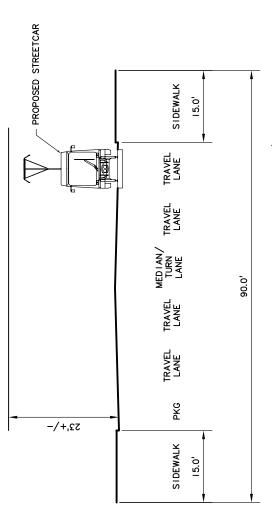
KING AT 1-5 BRIDGE (LOOKING NORTH) PROPOSED SECTION

SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004

WATERFRONT - INTERNATIONAL DISTRICT TYPICAL SECTION S. KING STREET AT 1-5

B-13





JACKSON AT 1-5 BRIDGE (LOOKING SOUTH)

SEATTLE STREETCAR NETWORK AND FEASIBILITY ANALYSIS JUNE 30, 2004

WATERFRONT - INTERNATIONAL DISTRICT TYPICAL SECTION
S. JACKSON STREET AT 1-5

### APPENDIX C

# Ridership on King County Metro Bus Routes 1-99 (2003)

# Appendix C - Ridership on King County Metro Bus Routes 1-99 (2003)

#	Part	Key Type	Service Category	Annualized Platform Hours	Annualized Rides	Rides Per Platform Hour	Signup	Week- day Rides
1			Local/Other	13,873	828,234	59.70	2003.1	2,763
1		SH	Local/Other	2,236	33,862	15.15	2003.1	101
2	N		Core	15,731	892,345	56.72	2003.1	2,680
2	N	EX	Peak	7,201	214,630	29.81	2003.1	845
2	S		Core	24,870	1,112,072	44.71	2003.1	3,660
3	N		Local/Other	7,709	495,232	64.24	2003.1	1,710
3	S		Core	20,627	905,186	43.88	2003.1	2,901
3	S	TB	Core	5,364	312,166	58.20	2003.1	1,229
4	N		Local/Other	11,341	610,306	53.82	2003.1	1,976
4	N	NT	Local/Other	4,072	153,894	37.79	2003.1	316
4	S		Core	22,128	980,071	44.29	2003.1	3,162
5			Core	28,866	1,043,251	36.14	2003.1	3,143
5		ALT	Core	15,739	517,410	32.87	2003.1	1,775
5		EX	Peak	3,023	124,714	41.26	2003.1	491
7	N		Core	26,147	1,272,196	48.66	2003.1	3,696
7	N	SH	Core	852	5,426	6.37	2003.1	8
7	N	TB	Core	12,345	666,543	53.99	2003.1	2,254
7	S		Core	31,379	1,377,188	43.89	2003.1	4,235
7	S	EX	Peak	6,875	195,072	28.37	2003.1	768
7	S	NT	Core	3,139	142,973	45.55	2003.1	294
7	S	SH	Core	2,806	36,036	12.84	2003.1	108
7	S	SHTB	Core	5,136	80,831	15.74	2003.1	275
7	S	ТВ	Core	24,858	1,160,664	46.69	2003.1	3,575
8			Core	13,822	486,410	35.19	2003.1	1,915
8		ТВ	Core	7,947	223,062	28.07	2003.1	476
9			Core	21,319	808,228	37.91	2003.1	3,182
10			Core	24,139	1,158,758	48.00	2003.1	3,818
10		SH	Core	1,155	1,934	1.68	2003.1	7

Seattle Streetcar Network and Feasibility Analysis

#	Part	Key Type	Service Category	Annualized Platform Hours	Annualized Rides	Rides Per Platform Hour	Signup	Week- day Rides
11			Local/Other	18,951	812,044	42.85	2003.1	2,646
12			Core	18,939	689,341	36.40	2003.1	2,356
12		TB	Core	6,446	283,016	43.91	2003.1	1,026
13			Core	18,012	1,049,398	58.26	2003.1	3,246
14	N		Local/Other	12,476	413,759	33.16	2003.1	1,322
14	S		Local/Other	20,045	890,327	44.42	2003.1	2,869
14	S	TB	Local/Other	582	2,794	4.80	2003.1	11
15			Core	25,834	1,263,816	48.92	2003.1	3,928
15		EX	Peak	4,919	209,296	42.55	2003.1	824
15		TB	Core	5,291	181,020	34.21	2003.1	603
16			Core	48,946	1,264,010	25.82	2003.1	3,995
16		EX	Peak	4,551	92,456	20.32	2003.1	364
17			Local/Other	24,910	565,411	22.70	2003.1	1,815
17		EX	Peak	2,934	102,616	34.98	2003.1	404
18			Core	19,406	764,267	39.38	2003.1	2,375
18		EX	Peak	4,161	150,622	36.20	2003.1	593
18		TB	Core	11,977	467,295	39.02	2003.1	1,471
19			Peak	2,773	61,468	22.17	2003.1	242
20			Local/Other	15,894	519,317	32.67	2003.1	1,467
20		TB	Local/Other	7,209	273,812	37.98	2003.1	1,078
21			Local/Other	25,566	612,621	23.96	2003.1	1,883
21		EX	Peak	5,965	172,720	28.96	2003.1	680
22			Local/Other	19,885	495,332	24.91	2003.1	1,626
24			Local/Other	21,913	655,505	29.91	2003.1	2,107
25			Local/Other	10,020	169,418	16.91	2003.1	667
26			Local/Other	23,118	772,132	33.40	2003.1	2,376
26		EX	Peak	2,786	97,790	35.11	2003.1	385
27			Local/Other	16,838	387,606	23.02	2003.1	1,302
28			Local/Other	14,163	497,580	35.13	2003.1	1,731
28		EX	Peak	5,956	178,562	29.98	2003.1	703
28		SH	Local/Other	8,084	98,267	12.16	2003.1	202

#	Part	Key Type	Service Category	Annualized Platform Hours	Annualized Rides	Rides Per Platform Hour	Signup	Week- day Rides
28		TB	Peak	2,688	127,254	47.34	2003.1	501
31			Local/Other	14,955	566,590	37.89	2003.1	2,115
32		EX	Peak	2,985	81,534	27.32	2003.1	321
33			Local/Other	14,977	308,577	20.60	2003.1	1,075
35			Peak	677	10,922	16.13	2003.1	43
36			Core	40,154	1,394,940	34.74	2003.1	4,305
36		SH	Core	2,048	27,212	13.29	2003.1	79
36		TB	Core	22,013	1,140,461	51.81	2003.1	3,755
37			Local/Other	3,770	45,836	12.16	2003.1	178
37		EX	Local/Other	3,138	49,652	15.82	2003.1	192
38			Local/Circ	5,796	105,485	18.20	2003.1	333
39			Local/Other	14,705	320,206	21.78	2003.1	1,137
39		EX	Peak	2,739	62,992	23.00	2003.1	248
39		SH	Local/Other	1,765	15,074	8.54	2003.1	18
39		TB	Local/Other	5,958	140,842	23.64	2003.1	520
41			Core	49,005	1,371,212	27.98	2003.1	4,472
41		TB	Core	12,704	473,202	37.25	2003.1	1,863
42			Local/Other	16,967	690,379	40.69	2003.1	2,064
42		EX	Peak	3,395	95,758	28.20	2003.1	377
42		NT	Local/Other	3,748	127,875	34.12	2003.1	369
42		TB	Local/Other	4,376	91,171	20.83	2003.1	292
43			Core	41,763	1,572,419	37.65	2003.1	5,067
43		SH	Core	9,444	235,966	24.99	2003.1	788
44			Core	40,862	1,579,819	38.66	2003.1	5,057
45		EX	Peak	2,337	36,068	15.43	2003.1	142
46			Peak	2,921	47,244	16.17	2003.1	186
48	N		Core	30,782	1,376,846	44.73	2003.1	4,551
48	N	EX	Peak	1,888	63,246	33.50	2003.1	249
48	N	TB	Peak	1,627	37,347	22.96	2003.1	156
48	S		Core	18,373	1,062,406	57.82	2003.1	3,846

#	Part	Key Type	Service Category	Annualized Platform Hours	Annualized Rides	Rides Per Platform Hour	Signup	Week- day Rides
48	S	ALT	Core	15,512	800,608	51.61	2003.1	2,937
48	S	TB	Core	7,042	217,634	30.90	2003.1	433
51			Local/Circ	5,097	58,604	11.50	2003.1	182
53			Local/Circ	2,286	23,368	10.22	2003.1	92
54			Core	29,637	920,829	31.07	2003.1	2,832
54		EX	Peak	3,675	126,492	34.42	2003.1	498
55			Core	17,411	569,540	32.71	2003.1	1,883
55		SH	Core	2,583	33,826	13.10	2003.1	79
56			Local/Other	13,041	314,593	24.12	2003.1	958
56		EX	Peak	3,984	120,904	30.35	2003.1	476
57			Peak	2,781	73,914	26.58	2003.1	291
60			Local/Other	20,498	789,686	38.53	2003.1	3,109
60		TB	Local/Other	5,417	137,515	25.38	2003.1	2,003
64		EX	Peak	4,077	114,808	28.16	2003.1	452
65			Local/Other	24,442	723,154	29.59	2003.1	2,395
66		EX	Core	32,083	749,422	23.36	2003.1	2,187
67			Core	12,806	735,330	57.42	2003.1	2,895
68			Local/Other	9,801	314,020	32.04	2003.1	1,154
70			Core	29,684	832,418	28.04	2003.1	3,020
71			Core	17,984	439,901	24.46	2003.1	926
71		EX	Core	17,216	687,308	39.92	2003.1	2,440
72			Core	10,118	264,668	26.16	2003.1	535
72		EX	Core	17,331	811,766	46.84	2003.1	2,939
73			Core	9,867	258,979	26.25	2003.1	534
73		EX	Core	17,839	788,346	44.19	2003.1	2,808
73		TEX	Core	10,808	381,254	35.28	2003.1	1,501
74			Local/Other	15,803	381,000	24.11	2003.1	1,500
74		EX	Peak	4,500	82,296	18.29	2003.1	324
74		SH	Local/Other	7,857	58,044	7.39	2003.1	148
74		TB	Local/Other	7,176	109,039	15.19	2003.1	114

#	Part	Key Type	Service Category	Annualized Platform Hours	Annualized Rides	Rides Per Platform Hour	Signup	Week- day Rides
75			Core	33,164	1,203,439	36.29	2003.1	4,032
75		TB	Peak	4,458	135,890	30.48	2003.1	535
76			Peak	7,281	187,452	25.74	2003.1	738
77			Peak	5,571	139,954	25.12	2003.1	551
78			Peak	3,031	84,582	27.91	2003.1	333
79		EX	Peak	3,975	67,056	16.87	2003.1	264
81			Local/Other	822	13,935	16.95	2003.1	37
82			Local/Other	1,115	9,627	8.63	2003.1	28
83			Local/Other	1,050	17,225	16.40	2003.1	48
84			Local/Other	1,240	8,179	6.60	2003.1	26
85			Local/Other	1,101	18,300	16.62	2003.1	52
99		Street	Local/Other	10,195	406,597	39.88	2003.1	977

Notes:

ALT - Alternate

EX - Express

N - North

NT - Nighttime

S - South

SH - Shuttle

SHTB – Shuttle Turnback

TB - Turnback

TEX - Turnback Express

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### APPENDIX D

# Section 4(f) Resource Evaluation for the Waterfront - North Alignment

# Appendix D - Section 4(F) Resource Evaluation for the Waterfront - North Alignment

### **ISSUE**

Would Section 4(f) be applicable to the extension of the Waterfront Streetcar north to Amgen or points further north?

Section 4(f) of the Department of Transportation Act of 1966 states that it is national policy that "special effort be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." The implementation of the Act requires that the Secretary of Transportation "not approve any project that requires the use of publicly owned land from a public park, recreation area ... of national, State or local significance ... unless (1) there is no feasible and prudent alternative to using such land and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, ..." Any project using federal transportation funds or requiring United States Department of Transportation (USDOT) approval would be required to comply with Section 4(f).

### **OVERALL**

It would appear as though the section north of W. Thomas Street would be viewed as a Section 4(f) facility since the street right-of-way has been vacated. The section south of W. Thomas Street is more debatable, though Federal Transit Administration (FTA) may view it as a Section 4(f) facility. This would be consistent with Federal Highway Administration's (FHWA) view that the bicycle/pedestrian trail adjacent to the Alaskan Way Viaduct and just south of Broad Street is a Section 4(f) facility (Alaskan Way Viaduct and Seawall Replacement Project DEIS, March 31, 2004).

### **BACKGROUND**

The existing Waterfront Streetcar travels along the downtown Seattle waterfront to a point just north of Broad Street. There has been discussion of extending the streetcar line to the north. Just north of the existing streetcar line and maintenance facility is the beginning of Myrtle Edwards Park, which extends north to approximately W. Thomas Street where the Elliott Bay Park begins. Elliott Bay Park, in turn, continues along the waterfront alongside the Amgen development to approximately 16<sup>th</sup> Avenue W. The Elliott Bay Bike Trail continues north alongside 16<sup>th</sup> Avenue W

Myrtle Edwards Park is managed by Seattle's Department of Parks and Recreation. The easterly portion of this park is located on City of Seattle (City) street right-of-way (Alaskan Way). City Ordinance 104776, adopted in July, 1975, authorized the Department of Parks and Recreation to construct the Elliott Bay Park Bikeway. (Note, this "Elliott Bay Park" was later re-named Myrtle Edwards Park and should not be confused with the Elliott Bay Park owned by the Port of Seattle (Port) north of W. Thomas Street.) The ordinance states that the bikeway, along with the planting of trees, installation of landscaping, and construction of a pedestrian path, would occur in Alaskan Way from Bay Street to W. Thomas Street, as well as in portions of W. Thomas Street and Bay Street. The ordinance goes on to say that "should said streets at some future time be designated parkway, park drive, or boulevard, ..., the appropriations herein made from the City Street Fund and the Arterial City Street Fund should be reimbursable by appropriations from the Park Acquisition and Development Fund for any expenditures made for the purposes contemplated by this ordinance ..."

The current Elliott Bay Park is on property owned by the Port. The park itself is operated and maintained by the Port. In addition to the park itself, other Port recreation facilities in the immediate area include the Elliott Bay Fishing Terminal (Pier 86), the Smith Cove Park at Terminal 91, and the Terminal 91 Bike Path. The City vacated that portion of Alaskan Way right-of-way north of W. Thomas Street (and west of the BNSF railroad tracks) in 1969.

### **SECTION 4(f)**

Section 4(f) of the Department of Transportation Act of 1966 states that it is national policy that "special effort be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." The implementation of the Act requires that the Secretary of Transportation "not approve any project that requires the use of publicly owned land from a public park, recreation area ... of national, State or local significance ... unless (1) there is no feasible and prudent alternative to using such land and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, ..."

Section 4(f) applies only to publicly owned public parks and recreational areas. Both the City of Seattle and the Port of Seattle are public agencies.

Publicly owned land is considered to be a park or recreation area when the land has been officially designated as such or when the Federal, State or local officials having jurisdiction over the land determine that one of its major purposes or functions is for park, recreation, or refuge purposes. Generally speaking, the determination is made by the agency "owning or administering the land." The final decision on applicability of Section 4(f) to a particular parcel is made by the federal lead agency after consulting with the agency with jurisdiction concerning the kinds of activity or functions that take place on the land.

According to FHWA guidance, ii which is also used by the FTA, if a bikeway is primarily for transportation and is an integral part of the local transportation system, the requirements of Section 4(f) would not apply. Section 4(f) would apply to bikeways (or portions thereof) designated or functioning primarily for recreation unless the official having jurisdiction determines it not to be significant for such purpose." For the Alaskan Way Viaduct and Seawall Replacement Project, the FHWA has made a determination that the existing bike trail on Alaskan Way is a Section 4(f) facility, even though it is within the overall Alaskan Way street right-of-way. The bike path north of Broad Street is a basic continuation of this bike path.

Also according to the FHWA guidance, "Section 4(f) does not apply to either authorized or unauthorized temporary occupancy of highway right-of-way pending further project development. For authorized temporary occupancy of highway rights-of-way for recreation, it would be advisable to make clear in a limited occupancy permit with a reversionary clause that no right is created and the park or recreational activity is a temporary one pending completion of the highway project."

If it is determined that one or more segments of the alignments entail Section 4(f) properties, the FTA, as the lead federal agency on the streetcar project, would follow specific procedures in determining whether to allow use of the property. These procedures are detailed in the endnote below.<sup>iv</sup>

### APPLICABILITY OF SECTION 4(f) TO STREETCAR EXTENSION

### Section from Bay Street to W. Thomas Street

For the section from the current north terminal of the streetcar to W. Thomas Street, the enabling ordinance does mention the potential for the right-of-way to revert back to street use at a later time. There is no evidence that the right-of-way has been formally vacated or turned over to the Parks

Department for their exclusive and permanent use. This may qualify for "temporary occupancy" exception discussed above.

Concerning the bike path issue, the Elliott Bay Trail is shown on the official City's bike map, which would seem to indicate that it is primarily for transportation and an integral part of the local transportation system. It should also be noted that the Alaskan Way right-of-way is being used for more than just a bike path; it is also landscaped in a manner consistent with the landscaping of the park property adjacent to the right-of-way. It is debatable whether the "bikeway" exception would apply, especially given the decision by FHWA on the waterfront trail adjacent to the Alaskan Way Viaduct. In this instance, FHWA ruled that the bikeway was a recreational use under Section 4(f).

### Section from W. Thomas Street to Pier 91

The bike path issue is the same as noted above.

The street right-of-way issue does not apply, since the street has apparently been vacated by the City.

The Port, while not typically viewed as a park operator, has shown the overall right-of-way as a park and recreational facility, complete with benches, picnic tables, etc. It would be difficult to construct a persuasive argument that Section 4(f) does not apply to this section.

### **ENDNOTES:**

<sup>i</sup> Ordinance 102864, adopted in December 1973, authorized the creation of Elliott Bay Park to be located at Alaskan Way West between Bay Street and W. Thomas Street.

- (a) Determining Significance. For a property to be deemed significant, it must play an important role in meeting the objectives of a community in terms of the availability and functions of recreation, park or wildlife and waterfowl refuge areas. Significance is determined through consultation with the Federal, State, or local officials having jurisdiction over the property. Once a property's significance has been determined, Section 4(f) prohibits both the actual acquisition of land from the protected property and constructive use of the property where a project's proximity to the Section 4(f) resource substantially impairs the normal use of the land.
- (b) Developing Alternatives. Parklands are to be protected unless unusual factors or unique problems are present, or the cost, environmental impacts, or community disruption resulting from proposed alternatives are particularly large. In evaluating an alternative, one must consider whether the alternative uses Section 4(f) property, whether it is prudent and feasible, and to what extent it harms the resource. If several alternatives include the use of land from a Section 4(f) resource, the alternative which is prudent and feasible and that has the least overall impact on the resource, including mitigation measures, must be selected.
- (c) Section 4(f) Evaluation. Whenever Section 4(f) property is used for a project, documentation must be prepared that demonstrates that there are unique problems or unusual factors involved in

ii Section 4(f) Policy Paper, USDOT, Federal Highway Administration, October 5, 1987, p.17.

iii Section 4(f) Policy Paper, op.cit., p. 19.

<sup>&</sup>lt;sup>iv</sup> Per FTA guidance, the compliance process for projects that may have an effect on Section 4(f) lands typically has three steps:

the use of non-Section 4(f) alternatives, or that the costs and social, economic, and environmental impacts, or community disruption resulting from the alternatives are particularly large. The evaluation must contain the following information, developed by the applicant in cooperation with FTA:

- A description of the proposed action.
- A description of the resource.
- The impacts of each alternative on the resource.
- Alternatives to avoid using the resource.
- Measures to minimize harm.
- Coordination with the agency having jurisdiction over the Section 4(f) property.